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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
AU, GARY	

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/941,424	JUTZI, CURTIS E.	
	Examiner	Art Unit	
	Gary Au	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 7 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,758,257 Herz et al. (Herz) and further in view of US Patent No. 5,801,747 (Bedard) and US Patent No. 6,647,411 Towell et al. (Towell).

As to claim 1, Herz teaches a method comprising: for a customer of a broadcast service, determining, by executing server software (it is noted that the server software is within system controller 506 or 606 to be executed for scheduling the presentation of the program materials according to the data stored on the data collection memory 508 – figure 5 and 6, col. 42 lines 1-11), predicted content (video programming from virtual channel, col. 45 lines 34 – 55) that the customer's client software (within set top terminal - figure 9, col. 45 lines 9-33) is expected to acquire from the service on behalf of the customer, based on (1) billing information (updated customer profiles) for the customer

received from the customer's client software and that describes previously broadcast content acquired by the client software on behalf of the customer (the updated customer profile containing information about the viewing history is sent from the set top multimedia terminals to the head end 502 – figure 5, col. 25 lines 7-15, 45-48 , col. 29 lines 52-67, col. 41 line 57 - col. 42 line 11), and (2) a description of available content (content profiles, col. 11 lines 45-58) that will be available for broadcast by the service and that can be acquired by the plurality of customer's client software (the highest matched programs are selected for presentation as virtual channel based on the content profile and customer profile, col. 25 lines 16-30, col. 24 line 56 – col. 25 line 6); wherein one or more vectors describe the predicted content (content profiles, col. 11 lines 45-58); Herz also teaches a weighing function based upon standard deviation (col. 12 lines 56-64 and col. 13 lines 40-54); sorting the remaining one or more vectors based on standard deviation (col. 5 line 66 – col. 6 line 13 and col. 15 lines 34-43); and determining top n vectors from the sorted one or more vectors to become part of a personal profile for the customer (col. 5 line 66 – col. 6 line 13 and col. 15 lines 34-43). However, Herz does not teach removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content.

In an analogous art, Bedard teaches removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content (col. 6 line 63 – col. 7 line 6).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Herz's system to include removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content, as taught by Bedard, for the advantage of keeping an updated viewer profile. However, the combined system of Herz and Bedard fails to disclose updating the personal profile for the customer when new billing information for the customer is received from the customer's client software.

In an analogous art, Towell teaches updating the personal profile for the customer when new billing information for the customer is received from the customer's client software (col. 4 line 65 – col. 5 line 6).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combined system of Herz and Bedard to include updating the personal profile for the customer when new billing information for the customer is received from the customer's client software, as taught by Towell, for the advantage of keeping a current user viewing data (col. 5 lines 2-6).

As to claim 7, Herz teaches a machine-readable medium (Within 506 – figure 5, col. 42 lines 1-11) having a plurality of instructions stored therein which when executed by a processor (system controller 506 or 606 – figure 5 and 6, col. 42 lines 1-11) cause an electronic system to support a broadcast service by determining, for a customer of the broadcast service, predicted content (video programming from virtual channel, col.

45 lines 34 – 55) that the customer's client software (within set top terminal - figure 9, col. 45 lines 9-33) is expected to acquire from the service on behalf of the customer, based on (1) billing information (updated customer profiles) for the customer received from the customer's client software and that describes previously broadcast content acquired by the client software on behalf of the customer (the updated customer profile containing information about the viewing history is sent from the set top multimedia terminals to the head end 502 – figure 5, col. 25 lines 7-15, 45-48 , col. 29 lines 52-67, col. 41 line 57 - col. 42 line 11), and (2) a description of available content (content profiles, col. 11 lines 45-58) that will be available for broadcast by the service and that can be acquired by the plurality of customers' client software (the highest matched programs are selected for presentation as virtual channel based on the content profile and customer profile, col. 25 lines 16-30, col. 24 line 56 – col. 25 line 6), wherein one or more vectors describe the predicted content (content profiles, col. 11 lines 45-58). Herz also teaches a weighing function based upon standard deviation (col. 12 lines 56-64 and col. 13 lines 40-54); sorting the remaining one or more vectors based on standard deviation (col. 5 line 66 – col. 6 line 13 and col. 15 lines 34-43); and determining top n vectors from the sorted one or more vectors to become part of a personal profile for the customer (col. 5 line 66 – col. 6 line 13 and col. 15 lines 34-43). However, Herz does not teach removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content.

In an analogous art, Bedard teaches removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content (col. 6 line 63 – col. 7 line 6).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Herz's system to include removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content, as taught by Bedard, for the advantage of keeping an updated viewer profile. However, the combined system of Herz and Bedard fails to disclose updating the personal profile for the customer when new billing information for the customer is received from the customer's client software.

In an analogous art, Towell teaches updating the personal profile for the customer when new billing information for the customer is received from the customer's client software (col. 4 line 65 – col. 5 line 6).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combined system of Herz and Bedard to include updating the personal profile for the customer when new billing information for the customer is received from the customer's client software, as taught by Towell, for the advantage of keeping a current user viewing data (col. 5 lines 2-6).

As to claim 13, Herz teaches a server (head end 502 – figure 5, col. 41 line 57 – col. 42 line 11) to determine, for each of a plurality of customers of the broadcast service, predicted content (video programming from virtual channel, col. 45 lines 34 – 55) that the customer's client software (within set top terminal - figure 9, col. 45 lines 9-33) is expected to acquire from the service on behalf of the customer, based on (1) billing information (updated customer profiles) for the customer received from the customer's client software and that describes previously broadcast content acquired by the client software on behalf of the customer (the updated customer profile containing information about the viewing history is sent from the set top multimedia terminals to the head end 502 – figure 5, col. 25 lines 7-15, 45-48 , col. 29 lines 52-67, col. 41 line 57 - col. 42 line 11), and (2) a description of available content (content profiles, col. 11 lines 45-58) that will be available for broadcast by the service and that can be acquired by the plurality of customers' client software (the highest matched programs are selected for presentation as virtual channel based on the content profile and customer profile, col. 25 lines 16-30, col. 24 line 56 – col. 25 line 6), wherein one or more vectors describe the predicted content (content profiles, col. 11 lines 45-58). Herz also teaches a weighing function based upon standard deviation (col. 12 lines 56-64 and col. 13 lines 40-54); sorting the remaining one or more vectors based on standard deviation (col. 5 line 66 – col. 6 line 13 and col. 15 lines 34-43); and determining top n vectors from the sorted one or more vectors to become part of a personal profile for the customer (col. 5 line 66 – col. 6 line 13 and col. 15 lines 34-43). However, Herz does not teach removing vectors from the one or more vectors that have a reference count lower than a

determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content.

In an analogous art, Bedard teaches removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content (col. 6 line 63 – col. 7 line 6).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Herz's system to include removing vectors from the one or more vectors that have a reference count lower than a determined value, wherein the removed vectors are determined to not be valuable for describing the predicted content, as taught by Bedard, for the advantage of keeping an updated viewer profile. However, the combined system of Herz and Bedard fails to disclose updating the personal profile for the customer when new billing information for the customer is received from the customer's client software.

In an analogous art, Towell teaches updating the personal profile for the customer when new billing information for the customer is received from the customer's client software (col. 4 line 65 – col. 5 line 6).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the combined system of Herz and Bedard to include updating the personal profile for the customer when new billing information for the customer is received from the customer's client software, as taught by Towell, for the advantage of keeping a current user viewing data (col. 5 lines 2-6).

As to claim 2, 8 and 14, Herz teaches that the available content includes digital movies that can be watched by the customers (col. 24 line 56 – col. 25 line 6).

As to claim 3, 9 and 15, Herz teaches that the available content includes digital audio recordings that can be listened to by the customers (col. 49 lines 32-51).

As to claim 4, 10 and 16, Herz teaches that the billing information is taken from one or more billing logs received from the customer's client software (the customer profile is sent to the head end, col. 41 line 57 – col. 42 line 11) and that identify the customer (by customer identifier interface 918 - figure 9, col. 45 line 56 – col. 46 line 18), the previously broadcast movies acquired by the client software on behalf of the customer (col. 25 lines 45-48, col. 29 lines 52-66, col. 41 lines 4-18), and the fraction of each acquired movie that was actually played back as determined by the client software (the set top multimedia terminal maintains a record of the watched channel for a period of time, col. 25 lines 31-44).

As to claim 5, 11 and 17, Herz teaches that the predicted content for each customer is determined by performing an algorithm in the server software (the agreement matrix) that computes the relevance of one or more categories in which a movie can be placed to what the client software can acquire from the service on behalf of the customer, based on a description of the previously broadcast content identified in

the billing information and that includes the one or more categories for each previously broadcast movie (the agreement matrix is created by comparing the characterization of the customer profile and content profile under categories such as film genres, directors, and MPAA rating, col. 11 lines 45-58, col. 25 lines 16-30).

As to claim 6, 12 and 18, Herz teaches that the predicted content for each customer is determined by further performing an algorithm in the server software that selects from among the available content a predicted movie whose one or more categories match the most relevant categories that were computed on behalf of the customer (the programs with the highest matching value with the customer profile and content profile is selected for presentation as virtual channels, col. 25 lines 16-30).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary Au whose telephone number is (571) 272-2822. The examiner can normally be reached on 8am-5pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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